

viewed from above, are considerably broader posteriorly than anteriorly, as in *Dasypus*. The olfactory lobes are large; and the corpora quadrigemina are completely covered. The oblique sulcus on the back part of the superior surface of each hemisphere, which runs forwards and outwards, is present, as in *Dasypus*, but it is very short. The two other sulci are well developed, that in the frontal portion being longer than in either *Dasypus* or *Tolypeutes*. The upper or second sulcus runs from in front—near the anterior internal angle of the superior surface of the hemisphere—backwards and outwards for some distance, but not nearly as far as the posterior margin of the cerebrum, it ceasing a little behind the level of the outer extremity of the posterior oblique sulcus. In this respect it resembles *Tolypeutes* and differs from *Dasypus* (*vide* fig. 3).

It is to Prof. Owen that we are indebted for our knowledge of the great differences between the colic cæca and female generative organs of the genera *Tatusia* and *Dasypus*. These facts, when taken in association with other characters above brought forward and referred to, may be thus tabulated:—

<i>Dasypus.</i>	<i>Tolypeutes.</i>	<i>Xenurus.</i>	<i>Chlamyphorus.</i>	<i>Tatusia.</i>
Ears apart.	Ears apart.	Ears apart.	Ears apart.	Ears approximate.
Nipples 2.	Nipples 2.	Nipples 2.	Nipples 2.	Nipples 4.
Uterus triangular.	Uterus triangular.	Uterus triangular.	Uterus pyriform.	Uterus pyriform.
External genitalia enormous.	External genitalia enormous.	External genitalia enormous.	External genitalia small in female.	External genitalia not excessive.
Glans penis simple.	Glans penis simple.	Glans penis simple.	?	Glans penis trilobed.
Vesiculæ seminales absent.	Vesiculæ seminales absent.	Vesiculæ seminales absent.	?	Vesiculæ seminales present.
Lateral colic cæca present.	No colic cæca.	No colic cæca.	Lateral colic cæca present.	No colic cæca.
Azygos lobe of lung present.	Azygos lobe of lung present.	Azygos lobe of lung present.	Azygos lobe of lung present (Hyrtl).	Azygos lobe of lung absent.

Thus we may infer that the genera *Dasypus*, *Tolypeutes*, and *Xenurus* resemble one another more than any of them do *Tatusia*. *Chlamyphorus*, in other respects so different from them all, is like *Dasypus* alone in its colic cæca, like *Dasypus*, *Tolypeutes*, and *Xenurus* in most respects, and like *Tatusia* only in the shape of its uterus.

2. Notes on a Specimen of *Polyborus* lately living in the Society's Gardens. By J. H. GURNEY, F.Z.S.

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The Society's 'Proceedings' for 1876 contain at p. 333 a plate and a concise notice of two remarkable *Polybori* which were said to have been obtained in Patagonia, and which were placed in the Gardens on the 2nd of March of that year.

On the 27th of May, 1877, one of these birds unfortunately died ; and on examining the skin of this specimen, which proved on dissection to be a male, I have noticed the following points.

The wing measures 15·6 inches ; but the ends of the primaries are worn considerably, and except for this the measurement would, I think, have exceeded 16 inches ; the length of the tarsus is 3·7, and that of the middle toe *s. u.* 2·3 inches.

I have had the opportunity of comparing these measurements with those of four specimens of *Polyborus tharus* which have been kindly lent to me by Messrs. Salvin & Godman, and with those of two specimens in the Norwich Museum ; also with the measurements given by Mr. Sharpe, at p. 32 of the first volume of his Catalogue, of two others in the British Museum.

Unfortunately in none of these eight examples is the sex recorded ; but the result appears to prove that *Polyborus tharus* is subject to considerable variation of size, which further investigation may show to be incident, in part, to the different localities from which the specimens have been obtained.

The following are the measurements alluded to :—

In the collection of			
Messrs. Salvin & Godman.	Wing.	Tarsus.	Middle toe <i>s. u.</i>
Bahia	14·8	3·0	1·9
„	15·1	3·5	2·2
„	15·6	3·5	2·1
Supposed to be from			
Bolivia	16·0	3·5	2·2
In the Norwich Museum.			
Locality unknown	17·2	3·7	2·3
„	17·4	3·9	2·1
In the British Museum, as given by Mr. Sharpe.			
Locality not quoted	15·5	3·8	
„	17·9	3·8	

It will be seen from the above measurements that there is nothing in the dimensions of the specimen which died at the Gardens to show that it is not an abnormal example of *P. tharus* ; and although the extraordinary paleness of the ground-colour of its plumage presents a curious difference from the coloration of the same portions of the plumage in *P. tharus*, the form and disposition of the markings in great measure agree with those of that species in its immature stage.

The following notes refer to the details in which the pale specimen agrees with the ordinary *P. tharus* in its immature stage :—The upper part of the head, including the occipital crest, is decidedly darker than the adjacent plumage ; the ear-coverts are whole-coloured and of a castaneous tint ; the feathers of the throat and upper breast have strongly marked longitudinal shaft-marks ; and similar shaft-marks, but narrower and fainter, are perceptible on the lower breast

and on the interscapular feathers. All these shaft-marks resemble greatly in shape those on the corresponding portions of the plumage in the normal immature *P. tharus*; but in the latter the shaft-marks are paler than the sides of the feathers, while in the pale Patagonian specimen they are darker and more rufous. In the last-named bird faint transverse marks of a similar rufescent tint, but very pale, are perceptible on the abdomen and under tail-coverts; similar transverse marks, but darker, less rufous and more numerous, are apparent in a specimen of *P. tharus* in Messrs. Salvin & Godman's collection, marked "Bolivia?," which seems to me to be passing from the immature to the adult stage. Transverse bars alternately dark and pale and of a similar character are found on the lower part of the back in *Polyborus tharus* in all its stages; and these markings, though modified in their coloration, especially by the substitution of dull fulvous bars for those of blackish brown in ordinary specimens, are unmistakably present in the pale specimen under consideration.

The latter bird was moulting its primaries when it died; and I observe that the transverse bars on the new quill-feathers are broader than on the old, the latter agreeing in general character with the corresponding bars in immature specimens of the normal *P. tharus*, and the former with the same bars in adult birds. These bars are much more rufous, especially on the newly acquired feathers, than is the case in normal specimens; in the latter they are of various shades of brown, but not tinged with rufous.

The narrow transverse bars on the upper surface of the tail are less distinct in the Patagonian pale bird than in ordinary specimens of *P. tharus*; but they are similar in character and of about the same number (from 15 to 16). The broad terminal blackish-brown band at the end of the tail in the ordinary bird is represented in the pale one by a dull fawn-coloured band of similar dimensions tinged with rufous on its upper edge and on the external webs of the outer pair of rectrices¹.

During a recent visit to the Zoological Society's Gardens, I observed that the bare skin on the face of the survivor of the two pale birds, changed rapidly from carmine-red to pale pink; but Mr. Bartlett informed me that in neither of the pale specimens did these occasional and transient changes assume a wider range, and that in them the bare skin never became yellow, as may be sometimes seen to be the case (even to the extent of a decided lemon-colour) in the normal specimens of *Polyborus tharus* inhabiting the adjacent cages.

On the whole, I incline to agree with the opinion expressed by Mr. Selater in his original notice of this curious pair of birds, that they are "young individuals of *P. tharus* in an abnormal phase of plumage," or, as I would rather say, of colouring generally.

¹ The tail in the pale birds was imperfect when they were drawn for the plate in the Proc. Zool. Soc.; but the specimen under consideration obtained its full tail subsequently.